EX PARTE OR LATE FILED

LEVENTHAL SENTER & LERMAN PLLC

ORIGINAL

RECEIVED

AUG 27 2003

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

August 27, 2003

STEPHEN D BARUCH
(202) 429-4626

E-MAIL
SBARUCH@LSL-LAW.COM

DIRECT FAX
(202) 429-4626

Ms Marlene H Dortch
Secretary
Federal Communications Commission
236 Massachusetts Avenue N E , Suite 110
Washington, DC 20002

Re: Notice of *Ex Parte* Presentation in IB Docket No. 02-10

Dear Ms Dortch

This letter provides notice that on August 25, 2003, Robert Hanson, Vice President/Regulatory Affairs of Maritime Telecommunications Network, Inc ("MTN"), along with Raul Rodriguez and Stephen Baruch of Leventhal, Senter & Lerman P L.L C (attorneys for MTN), met with the members of the staff of the Commission's International Bureau that are copied below

During the meeting, MTN discussed the results of the 2003 World Radiocommunication Conference deliberations on the licensing and regulatory status of earth stations on board vessels ("ESV") within the C- and Ku-bands – matters that are under consideration within IB Docket No 02-10 The first two attachments to this letter were introduced in this connection The participants also discussed matters pertaining to the domestic regulatory implementation of the outcome of WRC-03 in the forthcoming notice of proposed rule making in IB Docket No 02-10. The presentation in the third attachment to this letter and the revised example rules for introduction of ESVs into the 4/6 and 11-12/14 GHz bands that are contained in the fourth attachment to this letter were also addressed. With respect to its proffered example rules, MTN made clear that the intent of its proposals for Section 25 134 were for rules that would apply to ESVs in the above-mentioned bands in addition to the currently-applicable rules for very small aperture terminals ("VSATs"), and not in lieu of the current rules The discussion also touched upon statutory and practical issues regarding the use of a VSAT model for the licensing of ESVs (including the ability of a U S -licensed "hub" station to control completely the ability of "remote" stations within the network, regardless of the flag of the vessel on which the station may be located), and the steps that can practicably be taken and that are being taken by some ESV operators today to ensure the pointing accuracy of an ESV remains within 2/10 of a degree of the satellite with which the station is communicating.

0+1

Pursuant to Section 1 1206(b) of the Commission's Rules, 47 C F R § 1 1206(b), the original and one copy of this letter, with the attachments, are submitted for inclusion in the file of the above-referenced proceeding

Please direct any questions you may have to the undersigned

Respectfully submitted,

Stephen D Baruch
Attorney for Maritime Telecommunications Network Inc

Attachments

cc (w/ attachmts) via e-mail Thomas Tycz
John Martin
Bill Howden
Frank Peace
Karl Kensinger
George Sharp
Shahnaz Ghavami
Sylvia T Lam
Andre Rausch

ATTACHMENT 1

WRC-03 OUTCOME WITH RESPECT TO AGENDA ITEM 1.26

A Guided Tour of the Results

1 The Radiocommunication Assembly met the week before WRC-03 and it adopted three new technical recommendations (in addition to the two previously adopted) to complete all the study work required to fulfill the agenda item on ESVs

2 The Conference adopted a regulatory basis for ESVs by adding footnotes to the Table of Allocations that point to a resolution with regulatory, operational and technical requirements The resolution also encourages administrations to use the guidelines in a new WRC recommendation for bilateral and multi-lateral agreements on ESV operation

3 The Conference decided not to adopt a definition of an ESV in Article 1, as proposed by the U S and CITEL Thus, there is no definition of an ESV other than it is a satellite earth station on board a vessel In other words, ESVs are not a defined type of station nor are they new service They are simply a specific application of the FSS

4 Footnote 5 AA16 was placed next to the FSS allocations in C- and Ku-band It permits ESVs to communicate in the FSS on a co-primary basis under the requirements of Res. COM4/20,

5 Footnote 5 AA17 is intended to ensure that ESVs comply with Res. COM4/20 instead of operating under the secondary MSS allocation in Ku-band with no restrictions. There are several problems with this footnote as it is written

   a An ESV is not an SES because it is not communicating in the MMSS nor does it comply with the requirements of Article 51 Therefore, it is doubtful whether the footnote would apply

   b There are no commercial satellites that are coordinated for the MSS in this band and, therefore, there are no services available

   c This footnote should not have been adopted because it imposes restrictions on an allocation that was not covered by the agenda item and it sets a hard limit of 21 dBW e i.r p that has never been studied by the ITU-R We do not know as yet what effect this limitation may have on the service for which this allocation was intended (OmniTracks)

   d It would seem to apply to the ConneXion by Boeing service as well In other words they could operate under this allocation with the requirements of Res Com4/20 either in lieu of or in addition to the requirements of their own footnotes and resolution

6 Footnote 5 AA18 is a country footnote, which names those countries that do not require prior agreement for operation of ESVs in the band 14-14 5 GHz At WRC-03 only Greece, Cyprus and Malta signed the footnote It is highly probable that other countries will sign the footnote at the next WRC as it will significantly reduce the administrative burden when there is no FS in the band

7 Footnote ESVXXX was added on the last working day of the Conference by the Arab Group It attempts to limit ESV operation in the countries named to secondary MMSS In addition it requires ESVs to operate in compliance with Res COM4/20 However, this footnote says the ESVs "may operate" under the secondary MMSS Therefore, it does not preclude operation under the FSS and it will become an additional allocation to the allocation given in 5 AA16 This footnote will be very difficult for the BR and the RRB to interpret for the following reasons.

a There is no MMSS or MSS allocation in C-Band Therefore, the status of this footnote in this band is questionable

b If ESVs were truly operating in the MMSS, they would have to comply with article 51 of the Radio Regulations, which is not possible

c Res Com4/20 specifically says that ESVs are operating in the FSS and the technical limitations imposed in the annexes are for an FSS terminal operating on co-primary basis with terminals in the FS

This footnote will almost certainly require a rule of procedure, which may not achieve the results desired by the proponents but it will certainly lead to some confusion as to which of two allocations the ESV is operating under.

8 Resolution COM4/20 contains all of the mandatory technical, operational and regulatory requirements. These requirements are for the most part a restatement of the parameters used to characterize ESVs in the sharing studies conducted by the ITU-R Their primary purpose is to ensure that ESVs do not cause unacceptable interference to other services and that if such interference should occur, there will be the means to force compliance with the restrictions or terminate the emissions.

The principle regulatory requirement is that there will be a prior agreement with concerned administrations before the ESV operates within the minimum distances specified in Item 4 of Annex 1. In this way, the ESV emissions can be limited to frequencies and other technical requirements can be imposed that minimize the potential for interference.

Res COM4/20 states in *noting a)* that administrations may also authorize ESV operation under the provisions of **No. 4.4** Operation under **No. 4.4** clearly does not provide for the protection of the FS as would be accomplished with a prior agreement However, operation on a non-interference basis will continue to be a the primary mode of operation for ESVs until the frequency-use agreements can be negotiated with concerned administrations and may be the only mode for certain countries who will not enter into negotiations

The technical and operational parameters required for ESV operation are very similar to those proposed by the U S and in the CITEL Inter-American Proposal (IAP), which the U S supported A few additional restrictions have been imposed, such as the requirement the e.i r p. limits shall be compliant with the FSS intersystem coordination agreements that may agree to more stringent e.i r.p levels than those stated in Annex 1 One very important difference from the U S and CITEL proposals is that Res COM4/20 allows administrations to authorize ESVs with antennas as small as 0.6 m for Ku-band operation provided that the interference to the terrestrial services is no greater than that which would be caused with an antenna size of 1 2 m, which is the minimum size in the IAP and the U S proposal There will be very few areas of the world where FSS coordination agreements would allow such small antennas, but apparently antennas as small as 0 75 m have been deployed in this band.

9 Recommendation COM4/B provides non-mandatory guidelines for administrations in structuring agreements with other administrations for ESV operation within the minimum distances. The Conference felt that it was important to include these guidelines because the regulatory authorities in many countries would otherwise be aware of the important issues to consider in authorizing a frequency-use agreement

Footnotes 5 AA16, 5 AA17 and 5 AA18 were specifically mentioned in Res. COM4/25 for provisional application starting on July 5, 2003 ESVXXX was not mentioned and, therefore, will most likely come into force on January 1, 2005

WRC-03 OUTCOME WITH RESPECT TO AGENDA ITEM 1.26

1. Modifications to the Table of Allocations

MOD (B21/389/1)

5 830-7 550 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
5 925-6 700	FIXED FIXED-SATELLITE (Earth-to-space) ADD 5 AA16 ADD ESVXX MOBILE 5 149 5 440 5 458	

MOD (B21/389/2)

11.7-14.25 GHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
14-14.25	FIXED-SATELLITE (Earth-to-space) 5 484A 5 506 ADD 5 AA16 ADD 5 AA18 ADD ESVXX RADIONAVIGATION 5 504 Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite ADD 5 AA17 Space research 5 505	

MOD (B21/389/3)

14.25-15.63 GHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
14.25-14.3	FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 ADD 5.AA16 ADD 5.AA18 ADD ESVXX RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite ADD 5.AA17 Space research 5.505 5.508 5.509	
14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 ADD 5.AA16 ADD 5.AA18 ADD ESVXX MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite[*] ADD 5.AA17 Radionavigation-satellite	**14.3-14.4** FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 ADD 5.AA16 ADD 5.AA18 Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite[*] ADD 5.AA17 Radionavigation-satellite	**14.3-14.4** Fixed FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 ADD 5.AA16 ADD 5.AA18 MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite* ADD 5.AA17 Radionavigation-satellite
14.4-14.47	FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 ADD 5.AA16 ADD 5.AA18 ADD ESVXX MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite* ADD 5.AA17 Space research (space-to-Earth)	
14.47-14.5	FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 ADD 5.AA16 ADD 5.AA18 ADD ESVXX MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) except aeronautical mobile-satellite* ADD 5.AA17 Radio astronomy 5.149	

[*] Note – "except aeronautical mobile" was removed by the changes introduced under Agenda Item 1.11

2. Footnotes to the Table of Allocations

ADD (B21/389/4)

5.AA16 In the bands 5 925-6 425 MHz and 14-14 5 GHz, earth stations on board vessels may communicate with space stations of the fixed-satellite service Such use shall be in accordance with Resolution **[COM4/20] (WRC-03)** (WRC-03)

ADD (B21/389/5)

5.AA17 In the band 14-14 5 GHz, ship earth stations with an e i r p greater than 21 dBW shall operate under the same conditions as earth stations on board vessels, as provided in Resolution **[COM4/20] (WRC-03)** This footnote shall not apply to ship earth stations for which the complete Appendix **4** information has been received by the Radiocommunication Bureau prior to 5 July 2003 (WRC-03)

ADD (B21/389/6)

5.AA18 Earth stations on board vessels communicating with space stations in the fixed-satellite service may operate in the frequency band 14-14 5 GHz without the need for prior agreement from Cyprus, Greece, Malta, [ ] within the minimum distance given in Resolution **[COM4/20] (WRC-03)** from these countries (WRC-03)

ADD ESVXX

ESVXX In the bands 5 925-6 425 MHz and 14-14 5 GHz, earth stations on board vessels may operate with the characteristics and under the conditions contained in Resolution **[COM4/20]** in Algeria, Saudi Arabia Bahrain, Comoros, Djibouti, Egypt, United Arab Emirates, Jordan, Kuwait, Libyan Arab Jamahiriya, Morocco, Mauritania, Oman, Qatar, Syrian Arab Republic, Sudan, Tunisia and Yemen, in the maritime mobile-satellite service on a secondary basis Such use shall be in accordance with Resolution **[COM4/20]** (WRC-03)

3. Technical & Regulatory Provisions Resolution

RESOLUTION [COM4/20] (WRC-03)

Provisions relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5 925-6 425 MHz and 14-14.5 GHz

The World Radiocommunication Conference (Geneva, 2003),

considering

a) that there is a demand for global wideband satellite communication services on vessels;

b) that the technology exists that enables earth stations on board vessels (ESVs) to use fixed-satellite service (FSS) networks operating in the uplink bands 5 925-6 425 MHz and 14-14 5 GHz,

c) that ESVs are currently operating through fixed-satellite service (FSS) networks in the bands 3 700-4 200 MHz, 5 925-6 425 MHz, 10 7-12 75 GHz and 14-14 5 GHz under No **4.4** of the Radio Regulations,

d) that ESVs have the potential to cause unacceptable interference to other services in the bands 5 925-6 425 MHz and 14-14 5 GHz,

e) that, with respect to the bands considered in this Resolution, global coverage is only available in the band 5 925-6 425 MHz and that only a limited number of geostationary FSS systems can provide such global coverage,

f) that, without special regulatory provisions, ESVs could place a heavy coordination burden on some administrations, especially those in developing countries,

g) that, in order to ensure the protection and future growth of other services, ESVs need to operate under certain technical and operational limitations,

h) that, within ITU-R studies, based on agreed technical assumptions, minimum distances from the low-water mark as officially recognized by the coastal State have been calculated, beyond which an ESV will not have the potential to cause unacceptable interference to other services in the bands 5 925-6 425 MHz and 14-14 5 GHz,

i) that, in order to limit the interference into other networks in the FSS, it is necessary to establish maximum off-axis e i r p density limits on ESV emissions,

j) that establishing a minimum antenna diameter for ESVs has an impact on the number of ESVs that will ultimately be deployed, hence it will reduce interference into the fixed service,

noting

a) that ESVs may be assigned frequencies to operate in FSS networks in the bands 3 700-4 200 MHz, 5 925-6 425 MHz, 10 7-12 75 GHz and 14-14 5 GHz pursuant to No **4.4** of the Radio Regulations and shall not claim protection from, nor cause interference to, other services having allocations in these bands,

b) that the regulatory procedures of Article **9** apply for ESVs operating at specified fixed points,

resolves

that ESVs transmitting in the 5 925-6 425 MHz and 14-14 5 GHz bands shall operate under the regulatory and operational provisions contained in Annex 1 and the technical limitations in Annex 2 of this Resolution,

encourages concerned administrations

to cooperate with administrations which license ESVs while seeking agreement under the above-mentioned provisions, taking into consideration the provisions of Recommendation **[COM4/B] (WRC-03)**,

instructs the Secretary-General

to bring this Resolution to the attention of the Secretary-General of the International Maritime Organization (IMO)

ANNEX 1 TO RESOLUTION [COM4/20] (WRC-03)

Regulatory and operational provisions for ESVs transmitting in the 5 925-6 425 MHz and 14-14.5 GHz bands

1 The administration that issues the licence for the use of ESVs in these bands (licensing administration) shall ensure that such stations follow the provisions of this Annex and thus do not present any potential to cause unacceptable interference to the services of other concerned administrations

2 ESV service providers shall comply with the technical limitations listed in Annex 2 and, when operating within the minimum distances as identified in item 4 below, with the additional limitations agreed by the licensing and other concerned administrations

3 In the 3 700-4 200 MHz band and 10 7-12 75 GHz range, ESVs in motion shall not claim protection from transmissions of terrestrial services operating in accordance with the Radio Regulations

4 The minimum distances from the low-water mark as officially recognized by the coastal State beyond which ESVs can operate without the prior agreement of any administration are 300 km in the 5 925-6 425 MHz band and 125 km in the 14-14 5 GHz band, taking into account the technical limitations in Annex 2 Any transmissions from ESVs within the minimum distances shall be subject to the prior agreement of the concerned administration(s)

5 The potentially concerned administrations referred to in the previous item 4 are those where fixed or mobile services are allocated on a primary basis in the Table of Frequency Allocations of the Radio Regulations

Frequency bands	Potentially concerned administrations
5 925-6 425 MHz	All three Regions
14-14 25 GHz	Countries listed in No **5.505**, except those listed in No **5.AA18**
14 25-14 3 GHz	Countries listed in Nos **5.505**, **5.508** and **5.509**, except those listed in No **5.AA18**
14 3-14 4 GHz	Regions 1 and 3, except countries listed in No **5.AA18**
14 4-14 5 GHz	All three Regions, except countries listed in No **5.AA18**

6 The ESV system shall include means of identification and mechanisms to immediately cease emissions whenever the station does not operate in compliance with the provisions of items 2 and 4 above

7 Cessation of emissions as referred to in item 6 above shall be implemented in such a way that the corresponding mechanisms cannot be bypassed on board the vessel, except under the provisions of No **4.9**

8 ESVs shall be equipped so as to

- enable the licensing administration under the provisions of Article **18** to verify earth station performance, and
- enable the cessation of ESV emissions immediately upon request by an administration whose services may be affected

9 Each licence-holder shall provide a point of contact to the administration with which agreements have been reached for the purpose of reporting unacceptable interference caused by the ESV

10 When ESVs operating beyond the territorial sea but within the minimum distance (as referred to in item 4 above) fail to comply with the terms required by the concerned administration pursuant to items 2 and 4, then that administration may

- request the ESV to comply with such terms or cease operation immediately; or
- request the licensing administration to require such compliance or immediate cessation of the operation

ANNEX 2 TO RESOLUTION [COM4/20] (WRC-03)

Technical limitations applicable to ESVs transmitting in the bands 5 925-6 425 MHz and 14-14.5 GHz

	5 925-6 425 MHz	14-14.5 GHz
Minimum diameter of ESV antenna	2 4 m	1 2 m*
Tracking accuracy of ESV antenna	±0 2° peak	±0 2° peak
Maximum ESV e i r p spectral density toward the horizon	17 dB(W/MHz)	12 5 dB(W/MHz)
Maximum ESV e i r p towards the horizon	20 8 dBW	16 3 dBW
Maximum off-axis e i r p density**	See below	See below

* While operations within the minimum distances are subject to specific agreement with concerned administrations, licensing administrations may authorize the deployment of smaller antenna sizes down to 0 6 m at 14 GHz provided that the interference to the terrestrial services is no greater than that which would be caused with an antenna size of 1 2 m, taking into account Recommendation ITU-R SF 1650 In any case, the use of smaller antenna size shall be in compliance with the tracking accuracy of ESV antenna, maximum ESV e i r p spectral density toward the horizon, maximum ESV e i r p towards the horizon and maximum off-axis e i r p density limits in the Table above and the protection requirements of the FSS intersystem coordination agreements

** In any case, the e i r p off-axis limits shall be compliant with the FSS intersystem coordination agreements that may agree to more stringent off-axis e i r p levels

Off-axis limits

For earth stations on board vessels operating in the 5 925-6 425 MHz band, at any angle φ specified below, off the main-lobe axis of an earth-station antenna, the maximum e i r.p in any direction within 3° of the GSO shall not exceed the following values:

5 925-6 425 MHz

Angle off-axis	*Maximum e i.r.p per 4 kHz band*
$2\ 5° \le \varphi \le 7°$	(32 – 25 log φ) dB(W/4 kHz)
$7° < \varphi \le 9\ 2°$	11 dB(W/4 kHz)
$9.2° < \varphi \le 48°$	(35 – 25 log φ) dB(W/4 kHz)
$48° < \varphi \le 180°$	–7 dB(W/4 kHz)

For earth stations on board vessels operating in the 14.0-14 5 GHz band, at any angle φ specified below, off the main-lobe axis of an earth station antenna, the maximum e i.r p in any direction within 3° of the GSO shall not exceed the following values

14.0-14.5 GHz

Angle off-axis	*Maximum e.i r p. in any 40 kHz band*
$2° \le \varphi \le 7°$	33 – 25 log φ dB(W/40 kHz)
$7° < \varphi \le 9\ 2°$	12 dB(W/40 kHz)
$9\ 2° < \varphi \le 48°$	36 – 25 log φ dB(W/40 kHz)
$48° < \varphi \le 180°$	-6 dB(W/40 kHz)

4. Operational Procedures Recommendation

ADD (B21/389/9)

RECOMMENDATION [COM4/B] (WRC-03)

Operational procedures for ESV use

The World Radiocommunication Conference (Geneva, 2003),

considering

a) that under the provisions of Resolution **[COM4/20] (WRC-03)** transmissions from ESVs within the distances defined in item 4 of Annex 1 of Resolution **[COM4/20] (WRC-03)** should be based upon prior agreement of concerned administrations,

b) that it is desirable to provide guidance on activities to achieve such prior agreement with concerned administrations,

c) that such guidance should include the operational procedures for ESV use,

recommends

that operation of ESVs follow the procedures set forth in Annex 1

ANNEX 1 TO RECOMMENDATION [COM4/B] (WRC-03)

Operational procedures for ESV use

A Initiation of contact

The ESV licensing administration or the licence-holder should contact, in advance of ESV operations within the minimum distances, the concerned administration(s) to obtain agreements that will establish the technical bases for avoiding unacceptable interference to the terrestrial facilities of the concerned administration or administrations

The minimum distances and concerned administrations are defined in items 4 and 5 of Annex 1 of Resolution **[COM4/20] (WRC-03)**, respectively

B Recommended actions of licensing administrations, licence-holders and concerned administrations

- The licensing administration or the licence-holder should provide the technical and operational parameters required by the concerned administration, among them, if required, information on the movement of the ship(s) equipped with ESVs within the minimum distances
- Concerned administrations that wish to permit the operation of ESVs should determine if they have terrestrial stations that could be affected by ESV operations with a view to identifying possible frequencies for ESV use that would avoid potential interference.

C Frequency use arrangements

National practices, as well as applicable Recommendations of ITU-R (such as ITU-R S.1587, SF 1585, SF 1648, SF 1649, SF 1650), may be used in reaching frequency usage arrangements

D Avoidance of unacceptable interference

According to Annex 1 of Resolution **[COM4/20] (WRC-03)** the ESV licensing administration shall ensure that such stations do not cause unacceptable interference to the services of other concerned administrations. In the event that unacceptable interference occurs, the licence-holder must eliminate the source of any interference from its station immediately upon being advised of such interference. Additionally, the licence-holder shall immediately terminate transmissions at the request of either the concerned administration or the ESV licensing administration if either administration determines that the ESV is causing unacceptable interference or is otherwise not being operated in compliance with the operating agreement

ATTACHMENT 2

OUTCOME OF WRC-03 WITH RESPECT TO ESVS

The Stage is Set for Domestic Regulatory Implementation

1 WRC-03 has established a permanent, international regulatory regime for ESVs that is now in effect.

2 RA-03 has successfully completed the technical recommendations that provide the methods and procedures for assessing and mitigating the potential for interference from ESVs into the FS

3 Under the regime set by WRC-03, ESVs are permitted to operate in the FSS at C- and Ku-band.

4 Protection of the FS is assured through prior frequency clearance of the ESV operating areas including ports and coastal areas where ESVs could potentially cause interference

- The methods of the ITU-R recommendations were developed within the National Spectrum Managers Association with the full involvement of the U S frequency coordination community, including Comsearch
- Until ESV operating areas can be cleared for the use of specific frequencies, ESVs will continue to operate on a 'non-interfering basis'

5 Protection of the FSS is assured by the current regulations for satellite earth station performance and through intersystem coordination agreements

6 Licensing ESVs as a VSAT network provides protection for the FS in port and coastal areas and it provides a single point of contact for all of the stations controlled by a single ESV operator

- The VSAT network model is the best way to assure compliance with the terms of licensure by providing a single point of control entirely within the jurisdiction of the FCC
- This single point of control would be responsible for the operations of its entire commercial fleet, without regard to the flag of the ships
- This model accommodates the fact that the routes and ports served by specific ships change frequently with seasonal demand and business requirements

7 There are many countries that are anxious to adopt domestic regulations and they are looking to the FCC for guidance in implementing regulations that permit the operation of ESVs.

8 The FCC should issue an NPRM that implements the decisions of WRC-03 and move towards the adoption of U S regulations for ESVs

ATTACHMENT 3

ESV Rules Should Provide For:

- ESVs to be licensed as a VSAT network
  - Single point of control (Hub/NOC) within a single jurisdiction;
  - All remotes in network under control of single licensee;
  - Coordination of port operating areas undertaken by network licensee;
  - Single POC for all license related issues.

ESV Rules Should Provide For:

- Operations in either C- or Ku-band, as recognized by WRC-03
  - FSS and co-primary;
  - Operating requirements as per Res. COM4/20;
  - Coordination methodology as per Rec. ITU-R S.1587, SF.1585, SF.1648, SF.1649, SF.1650;
  - No need for additional constraints.

ATTACHMENT 4

ESV LICENSING RULES

Section 25 103 is amended by adding new paragraph (g)

§25 103 Definitions

(g) *Satellite earth stations on board vessels (ESVs)* An earth station operating in certain bands of the fixed satellite service, located on board a water-borne vessel, and intended to be used while in motion or during halts at unspecified points

Section 25 115 is amended by adding new paragraph (c)(3)

§25 115 Application for earth station authorizations

(c)(3) Satellite earth stations on board vessels (ESVs) operating in the 4/6 GHz and/or 12/14GHz frequency bands Applications to license satellite earth stations on board vessels operating in the 4/6 GHz and 12/14 GHz frequency bands under blanket operating authority shall be filed on FCC Form 312, Main Form and Schedule B, for each large (5 meters or larger) hub station, and Schedule B for each representative type of small antenna (a minimum of 2 4 meters for the 4/6 GHz band and a minimum of 0 6 meters[NOTE] for the 12/14 GHz band) operating within the network

(i) An initial lead application providing a detailed overview of the complete network shall be filed Such lead applications shall fully identify the scope and nature of the service to be provided, as well as the complete technical details of each large hub station and each representative type of small antenna that will operate within the network Such lead applications for a single ESV network must identify

(A) The geostationary FSS satellites to be accessed,

(B) The operational area(s) where the proposed ESVs will operate For purposes of this section, operational area is defined as the area within United States territorial waters such as a port or coastline, where coordination between an ESV-equipped vessel operating in the 4/6 GHz frequency and/or 12/14 GHz frequency band, and terrestrial microwave services, would occur if required,

(C) The frequencies sought in the 4/6 GHz and/or 12/14 GHz FSS bands in each direction at each operational area The same spectrum per band in each operational area would be accessible by all network-associated ESV earth stations in that operational area,

(D) The maximum number of ESVs associated with the network that will be permitted to operate simultaneously in each operational area in the 4/6 GHz and/or 12/14 GHz bands

(ii) Frequency coordination of each operational area shall be completed prior to filing the application The coordination must be conducted in accordance with §25 203

(iii) Each licensee shall annually provide the Commission an updated list of all operational areas where coordinated operations are taking place as of the date of the report The annual list shall also identify the satellites providing service to the network as of the date of the report

NOTE The minimum diameter valued adopted by WRC-03 in Resolution [COM4/20] is 0.6 meters

Section 25.134 is amended by revising the section title and adding new paragraphs (a)(3) and (a)(4).

§25.134 Licensing provisions of Very Small Aperture Terminal (VSAT), ~~and~~ C-band Small Aperture Terminal (CSAT), and Satellite Earth Stations on Board Vessels (ESVs) networks

(a)(3) ESV networks operating in the 4/6 GHz frequency band All applications for operations will be routinely processed provided the network employs antennas that are 2.4 meters or larger in diameter, that are consistent with §25.209, the power levels are consistent with §§25.211(d) and 25.212(d), and frequency coordination, where necessary, has been satisfactorily completed The use of smaller antennas or non-consistent power levels require the filing of an initial lead application (§25.115(c)(4)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to any and all affected adjacent satellite operators by the operation of the non-conforming earth station

(a)(4) ESV networks operating in the 12/14 GHz frequency band All applications for operations will be routinely processed provided the network employs antennas that are 1.2 meters or larger The use of smaller antennas or non-consistent power levels require the filing of an initial lead application (§25.115(c)(4)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to any and all affected adjacent satellite operators by the operation of the non-conforming earth station